



## GUIDE TO

# WINTERISING

Whether you are laying up your vehicle for the colder months, or planning to tour all year, here's everything you need to know!

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**'Motorcaravanning during the winter is a unique experience, and hugely positive'**



CUT OUT  
AND KEEP  
GUIDE!



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advice

# WINTERISING YOUR MOTORHOME

If you want to keep your vehicle in perfect condition and avoid costly problems, it pays to winterise it properly when it's not being used, says Peter Rosenthal



If you can keep your motorhome in use all year round, it may help to prevent problems developing

**M**any people in the UK will only use their motorhome for three seasons, parking it up over the winter. You might think that not using your vehicle would be straightforward, but come the springtime, it can create problems if you don't lay up correctly.

Switching off your 'van and parking it up in October, then not switching it on again until March, is a surefire way to create potentially expensive problems. So how can you prevent this?

## TOUR ALL YEAR

Resting your motorhome over winter never does it much good and with the vehicle's rubber components – such as the drivebelts, cambelt and tyres – all set in one position, can cause problems, including flat spots on the tyres and premature failure of the drivebelts.

This is one reason why you should never miss a cambelt swap-by date, no matter how few miles it has done.

Happily, however, there's a really easy solution to all of this: simply keep using your motorhome!

Take advantage of the quieter sites, thanks to the children going back to school, and discover the many joys of camping out of season.

One weekend away each month will be enough to keep the vehicle's fluids



Fuses are one of the essential items to carry in your vehicle during the winter

circulating and help to stop the tyres and other rubber components sitting in one position for long periods.

Some people think firing the engine up every other week over winter and letting it idle for 10 minutes is a good idea. Well, it is and it isn't.

Engine wear is at its maximum on a cold start and the engine really needs to be run fully up to temperature (the water temp gauge in its normal middle position) and at a variety of revs.

It's best to get the engine hot and take it for at least a 10-mile drive, so that the emissions system gets fully up to temperature and can burn off sooty deposits built up at low revs.

If you just idle it for 10 minutes with the 'van stationary, you only help the drivebelt and cambelts – it won't do your emissions system any good and won't prevent tyres flat-spotting.

Using your motorhome really does keep it in the healthiest condition. ➔



## PACK WINTER ESSENTIALS

If you plan to use your 'van throughout the winter, it makes sense to carry a few seasonal essentials, to ensure you can stay safe. So as well as your usual bedding and food and drink, make sure you have a full tank of fuel and a fresh gas cylinder on board.

It's also wise to take a few basic tools and spares with you, to avoid being stranded anywhere – bear in mind that the average breakdown call-out time in winter is over an hour and a half, so it pays to carry the essentials.

As well as a socket set, pack some spare fuses, jump leads (or a lithium battery starter pack), a hi-vis jacket, a torch and a first-aid kit.

The most important thing to take with you, of course, is your phone and a charging lead – these could be a lifesaver in an emergency.

It's also worth putting 'what3words' on your phone – this clever app has divided the world into 3m squares, each of which is denoted by three words (for example, 'banana cricket cheesecake'). It's used by all of the emergency services and saves you having to muck about with longitude and latitude. It makes you far easier to locate if you've broken down and don't know where you are. It's also free, so put it on your phone now!

Some people like to pack a snow shovel, but if you're having to resort



This automatic boiler valve will trigger and dump your boiler water at 4°C



Make sure your engine coolant is not only changed at appropriate intervals, but also of the correct concentration



Water pumps (blue device) and hoses need to be drained down over winter



Before draining out all of the water, ensure stopcocks and valves are open

to digging out a 3.5-tonne motorhome, you really are in trouble. Unless you're built like Charles Atlas, just save your payload, put the heating on, make a brew and ring for help...

## WATER WOES

If you want to lay up your 'van, you'll need to empty the water tanks and drain the plumbing system.

This is because trapped water can freeze and as we all know from school science, water has the annoying habit of expanding in volume as it turns to ice. It can then crack almost any vessel it's contained in. Boilers, pipes, taps, pumps and filters are all at risk if you don't drain the system over winter.

Happily, motorhome manufacturers have your back here and have built in automatic valves on the boiler, which will prevent anyone from inadvertently damaging their vehicle.

Truma uses an automatic valve that triggers at 4°C and won't reset until the 'van's interior is heated to 8°C. Some people put a clothes peg on this valve to prevent it dumping the water in winter – don't do this, because you will invariably forget to remove it and end up damaging something.

More recent designs of Truma valve are of the electric FrostControl twist type and can't be held shut.

To drain the water system fully, empty out the waste-water tank (in a suitable place) and the fresh-water tank.

You'll either have a valve on the top of the tank, or inside it in the base (you might need to remove an inspection cover at the top and reach inside), or



Most motorhome fresh-water tanks have a drain-down valve at the top



When recommissioning the 'van water system, clear air from pipes by opening tap furthest from the fresh-water tank and keep open until it stops spitting



When you're draining down the water system, don't forget the shower head



Heating and insulating the 'van water tanks helps to prevent them freezing

an external tap. Open the boiler valve, too. While the tanks are draining, open all of the taps (switch off the water pump) and leave them in the 'on' position. Remove any water filters.

To remove all traces of water in the system, you can also buy drain-down kits, such as Floë ([keepfloeing.com](http://keepfloeing.com)), which use compressed air. You need to make sure all of the diverter valves (if fitted) are set to open, the tanks are drained and the water pump is off.

Floë offers a manual system that is linked to a tyre compressor, while



its newer, all-in-one Induratec (about £220) has a built-in compressor and can be left permanently fitted to the water and electrical system.

To recommission your water system after winter drain-down, shut all of the valves on the tanks and boiler, refill the system and shut the taps.

Refit your water filter. Switch on the water pump and open the tap furthest from the fresh-water tap.

Water will start dribbling out of the tap, then begin to spit a little bit. Wait until it flows freely, then shut off the tap. Repeat this process with all of the other taps in the vehicle (don't forget the shower). You might need a couple of laps of opening and closing the taps until water flows freely from them.

The other water system in your 'van is, of course, the engine coolant system. This is water with added coolant.

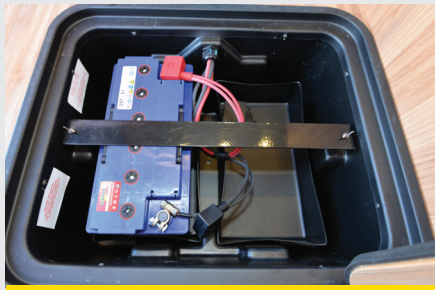
As well as allowing the engine to run at over 100°C without boiling (thanks to the pressurised system), it contains antifreeze to prevent the engine icing solid during the winter.

The concentration of coolant should be checked by the garage in servicing work, so as long as you have your 'van serviced at the correct intervals, this should be nothing to worry about.

If you're not sure, you can purchase testing gauges from your local motor factor that will allow you to check the concentration. It is worth checking, as ice can cause major engine damage, ranging from pushing out a core plug to cracking the block itself. Core plugs can be replaced cheaply and easily, but a cracked block is terminal.



You can easily check if your charger also tops up the vehicle battery by using a multimeter set to volts – the voltage will increase when hooked up if it's receiving any charge



Adding a second battery not only increases your off-grid capability, but also helps to keep your vehicle powered up for longer over winter



It's best to have your 'van plugged in over the winter, because solar panels are far less efficient in the cold and might not keep batteries topped up

### BATTERY BOTHER

A quarter of all winter call-outs to the AA are for flat batteries. This is largely because battery capacity is reduced in cold temperatures and cold engines can be harder to crank.

Some people mistakenly think it's because the engine oil is thicker when it's cold: it's not, modern multigrade oil actually gets thicker as it heats up.

What does get thicker and harder to vaporise at low temperatures is the diesel fuel, which is why some engines use glow plugs or starter burners, or alter the timing during cold starts.

But reduced battery capacity doesn't only affect fossil fuel vehicles – the cold also affects electric vehicles and will reduce their range. Many makers add heating circuits to battery banks, but this still impinges on range.

As well as the vehicle starter battery being affected by temperature, so are the leisure batteries, which can be a major inconvenience.

While most motorhomes have solar panels, which in summer, will help to trickle-charge the leisure batteries, in winter, the angle of the sun, the ➔



The Battery Master is a simple way to have your vehicle battery topped up automatically by the leisure batteries



If your battery is only reading 12V, it's flat. A fully charged battery will show at least 12.8V on the panel



To top up the fluid in a lead acid battery, remove the cell cap with a coin. Always wear gloves and eye protection for this



Lead plates must be immersed. If not, you'll need to add deionised water (not tap water, which will damage the cells)





A 230V dehumidifier is one way to keep your motorhome dry, but gel or crystals work equally well and will be cheaper

intensity of light and reduced daylight hours make them far less effective.

On my 'van, I've measured output from its 150W solar panel drop from 8A in summer to as little as 0.8A in winter. Some people use dashtop solar panels plugged into their cigar socket over winter. These are so low powered, they're only of use in summer and even then it's marginal. In winter, even less so – so save your money.

It's simple: in the winter, plug your vehicle into a mains hook-up at home. Most motorhomes have chargers that can be left permanently plugged in and will keep the batteries healthy. Check with your 'van manufacturer or read the charger's spec in the handbook.

If your motorhome charging system isn't designed to be left plugged in, fit a battery conditioner – pick one to suit the capacity of your battery bank.

Some leisure battery chargers top up the vehicle battery when they're being charged up (by solar, mains hook-up or battery-to-battery charger).

If yours doesn't, it's worth adding an automatic top-up device that does. The easiest one to fit on a DIY basis is the £69.95 Van Bitz Battery Master, although if you prefer, they can fit it for you, for an extra £60.

Sterling also has a battery-to-battery maintainer (about £55 from 12Vplanet.co.uk), which will top up the vehicle battery from the leisure battery. Having the vehicle battery always topped up



A dehumidifier will have a water tank and an automatic shut-off valve when full. They do remove large amounts of water from the air, as you can see here

by the leisure battery will ensure your motorhome always starts in winter or after lay-up. These are fit-and-forget products (our favourite kind!).

Another way to stop batteries going flat is to fit a battery isolator or remove a lead. This isn't a good idea, though, as it will render your security system inactive (which might have insurance implications) and can cause all sorts of problems when you try to restart the vehicle in spring – from missing radio codes to dash warning lights.

If your motorhome uses lead acid batteries, they might need topping up from time to time – check them every six months or so. If there are removable covers on each cell – or the battery has a removable panel – it will need to be checked. The cell covers are usually unscrewed with a 2p coin and the acid level checked – it should cover the lead plates. If it doesn't, you'll need to add deionised water (not tap water!), which can be bought from any motor factor.

### INTERIOR DAMAGE

Mould and mildew in a motorhome can be caused by water damage (external leaks or burst plumbing) and must be nipped in the bud and rapidly fixed.

Assuming your vehicle isn't leaking and you've shut all of the windows, you don't really need to do a great deal to preserve the interior during lay-up. Some people like to open the cupboard doors and prop up cushions to allow air to circulate, but so long as the vents around the rooflights (mandatory for gas regulations) are not blocked, air should circulate sufficiently.

It's also a good idea to use gel or drying crystals to remove moisture from the air, or a mains-powered dehumidifier (probably not the most appealing item at current energy prices).



If you plan to use gas over the winter, butane (usually blue cylinders) is not the best product to use, because it doesn't work well below freezing



Switch to propane for all-year use and make sure you carry a spare bottle

Some like to add a small heater, but this isn't a good idea. Aside from the energy use, it can actually promote the growth of mould and mildew, especially if there's any moisture in the air.

### IT'S A GAS!

If you are planning to use your 'van all year and you are using butane (which



If you have a refillable LPG cylinder or an underslung tank, it's wise to buy locally where you are camping – it's formulated for local climates



is usually denoted by blue bottles), it might be sensible to switch to propane (usually in red bottles).

This is because your motorhome draws fuel from your gas bottle from the top, in the form of a vapour. The regulator then sets the pressure and the gas flows to the appliance(s) that require it – that could be the fridge, hob or heating system, for example.

The ability for a liquid to turn to gas is determined by its boiling temperature – for butane, this is  $-2^{\circ}$ , while propane will boil at  $-42^{\circ}$ .

In other words, if the temperature is below  $-2^{\circ}$  (for example, in a Scottish winter), butane is not going to work in your appliances.

Most motorhomes tend to come with propane these days, but if your vehicle doesn't and you want to have heating in winter, then switch to propane.

If your vehicle has an underslung tank – and many do nowadays – then you'll be running on LPG, which is a mixture of propane and butane.

The good news is, this is formulated to suit the climatic needs of wherever you fill up with it. So in the UK, it's mainly propane and should be fine anywhere within these shores.

The only thing to be aware of is that if you fill the LPG tank in France, then plan to visit Scotland in winter using the same fuel, it might not work so well. But this is a fairly unlikely scenario.

**FUEL CONCERNS**

One problem with diesel vehicles left stored in winter is that if they don't do a lot of mileage and are stored early,



Over the winter lay-up, it's best to fill your petrol motorhome's tank with E5 super-unleaded to avoid any problems

they might have a fuel tank that has been filled with summer diesel.

As the UK is classed as 'cold climate', the fuel companies switch to winter diesel from around mid-October to mid-March. So if you filled up before October (or came back from France, having filled up over there), you could still be running on summer diesel.

The problem with summer diesel during the winter is that the paraffin wax in the fuel (added to increase viscosity and lubrication) can start to thicken and create waxy crystals.

This forms a cloudy mixture in the fuel, which can clog lines and filters. So before winter lay-up, fill your tank with winter diesel. If your vehicle is used regularly throughout the winter, this is unlikely to be a concern, but it's something to be aware of if you have a low-mileage vehicle that is rarely used in the colder months.

Another new question, which has arisen with the increased use of biofuel (plant-derived ethanol) in fossil fuels, is that of damage to seals and injectors.

Diesel (B7) has 7% biofuel, while regular petrol (E10) has 10% biofuel and super-unleaded has 5%.

It's tempting to think of biofuel as organic and natural, but it's chemically aggressive and actually quite nasty.

This only affects older vehicles not designed to run on these fuels – if your van is pre-2000 and has a carburettor (very old petrols), and metal or rubber fuel lines, it might be affected. Modern vehicles use Viton seals and plastic fuel lines, which are unaffected by biofuel. Many modern European vehicles are designed to run on up to 85% biofuel.

The problem with biofuel in older vehicles is that if a seal is immersed in it, then left to dry out (for example, empty fuel tank) it can swell or crack, leading to leaks and failures.

The best thing to do is fill your tank before winter lay-up. In a petrol engine vehicle, use super-unleaded or add an ethanol stabilising additive to the fuel tank, such as Classic Valvemaster Plus (this product can be bought online for around £21 for 250ml, which will treat up to 250 litres of fuel).

However, most modern vehicles are not affected by the biofuel question, so if you have a new motorhome, you won't need to worry about it.

**TYRE ADVICE**

Before you put your vehicle away for winter lay-up, inflate the tyres to the maximum pressures indicated on the sidewalls, and then leave a note on the dashboard to remind you to reset the ➔



If you intend to leave a petrol vehicle for long periods with biofuel in the tank, it's well worth adding an ethanol stabiliser, such as Classic Valvemaster Plus



Diesel engines have had 7% biofuel in them for some years now – it's advisable to store them in winter with a full tank

CUT ALONG DOTTED LINE



correct pressure before driving it. Alternatively, you could simply drive the motorhome every couple of weeks during the winter months.

This is to prevent the damage caused by flat-spotting. Leaving your vehicle for long periods with the tyres in one position can damage the tyre structure, causing it to fail prematurely.

My own Renault Trafic suffered this problem over the lockdowns, when it wasn't used for several months – the tyres went egg-shaped and vibrated horribly. It felt as though they had just gone out of balance, but the local tyre centre found that large patches had been worn through the pointy bit of the egg shape. This could have caused a blowout, so new tyres were needed.

Some flat spots are not permanent and will come out after driving the vehicle for a short period of time.

The usual method is to get the tyres warm and then (safely) lift the vehicle up in the air while they're warm, to help them reshape. It doesn't always work and obviously, isn't practical to do on a motorhome, so the best bet is going to be inflating them to the maximum or driving the van regularly.

### KIT FOR ALL-YEAR USE

Adding heated pads and insulation to your water tanks is an excellent way to prevent frost damage, and some of these 12V pads can even be linked, so they will activate automatically at a preset temperature.

At the point of purchasing your motorhome, if there's a winter pack option – which often includes heated water tanks – tick it, as it's far easier to do this while the vehicle is being built. Equally, for all-year use, look for motorhomes that offer a minimum of Grade 3 thermal insulation.

Typically, A-classes with double floors will provide the best insulation, but coachbuilds can be nearly as good. The main areas of heat loss tend to be through steel bodies or windows, so pay particular attention to these – thick curtains that seal off the cab can be very effective in coachbuilds.

Another item to consider is a set of winter tyres – denoted by the Three Peak Mountain Snowflake symbol on the sidewalls (aka 3PMSF).

Most camper-specific Camping tyres are generally mud and snow rated, denoted by M+S on the sidewalls, but they will not be as effective as those with the 3PMSF symbol.

If you're planning a trip to the far north – to Scandinavia, say, to see the Northern Lights – you're best off fitting



Buy your diesel after mid-October to ensure that you lay up your motorhome with winter diesel and avoid problems with waxy crystals blocking fuel filters such as this



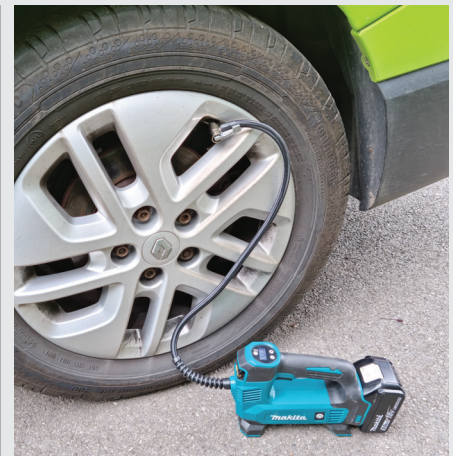
Older vehicle engines – pre-2000 and anything with a carburettor – should only be operated on E5 super-unleaded fuel, to avoid potential problems with biofuel

a set of dedicated Nordic or Ice rated snow tyres. These use super-soft compounds and tread patterns with lots of sipes (small wiggly lines cut into the tread), which are excellent at biting into icy surfaces to find that extra bit of grip when needed.

### VERDICT

The military's traditional 'seven Ps' motto is useful to bear in mind for winter prep (expurgated version!): Particularly Poor Planning Promotes Particularly Poor Performance.

There is no reason to have any issues with your motorhome, so long as you put a little thought into winterising. Don't be the one on your street who has to call out the recovery service because you have a flat battery – this is an entirely preventable problem!



If you're not going to use the vehicle over the winter months, pump the tyres up to the maximum pressure that is stamped on the sidewalls



need to know...

# HOW TO DEAL WITH DAMP

Damp is the motorhome's enemy all year round, but it's especially important to keep an eye on it in winter. Peter Byrne outlines what you need to know

**Y**our motorhome is a great place for making wonderful memories, but it is also a major investment, so keeping an eye out for signs of damp is a key part of maximising its life.

Moist air in a 'van can be caused by a number of factors, such as condensation – from cooking and showering – and water ingress, where rain gets in through gaps. Knowing what to look for is very important, whether you're checking your own 'van or buying pre-owned.

## Moisture traps

Shane Malpass from We Buy Any Motorcaravan explains: "Damp is what happens when moist air is trapped in a small space. Motorhomes are confined living spaces, the perfect trap for moist air. The UK has a wet climate, so there is always plenty of moist air that can easily be trapped inside.

"Older motorhomes are more likely to suffer severe damp. And while many newer models have been designed with the intention of stopping water ingress, they are not totally immune."

To help you to protect your vehicle, We Buy Any Motorcaravan offers some sensible habits to get into when you're



Touring in rainier climates means damp could be a problem

cleaning your motorhome, so you can check for those telltale signs of damp, particularly in the winter months.

■ Look carefully around the seals, and sealant found by the windows, seals and doors, along with anywhere you have drilled to fit equipment (such as aerial points or bike racks) and accessories into the main body.

- Examine the sealant for signs of damage, including cracks, peeling and knocks. If there's recently been a heavy downpour, this could make it simpler to spot water entry points.
- Check if any of the cushions, curtains or other fabrics have a musty smell.
- Make sure wallboards are showing no signs of pimpling, by running your hands over them; you're checking for anywhere on the surface that feels wet or has a spongy texture.
- Check the walls for discolouration, which can include black spots or other marks. They could also go a blue or pinkish colour, which will typically occur near windows and lockers.
- Do the floors feel spongy or creak? Either of these symptoms could be a sign of water ingress or damp.
- When water is getting inside your motorhome, it might 'hitchhike' on channels and pipes. This means that it dumps water in random parts of your vehicle, making it much harder to identify where the original entry point might be – this is something to bear in mind when you are checking the interior for signs of ingress.
- Check the internal screws for rust.



It's very important to inspect seals around windows and doors



## security

# STAYING SAFE OVER WINTER

If you're planning to lay up your motorhome for the colder months, a few simple precautions can help you to keep it secure

**A**ny security is better than none, of course, but an experienced thief can remove a budget lock in seconds, so it pays to buy wisely. Follow our guide to the top 10 security measures for your motorhome, and you will be making life as difficult as possible for any potential intruders if you put your 'van into storage over the winter months.

### 1 Wheel locks

Motorhome wheel locks come in all shapes and sizes, but bear in mind that in general, the more you spend, the better – and the more secure – your chosen product is likely to be.

If there's one thing not to skimp on, it's this – buy the best you can afford. Better still, buy more than one.

These days, there's a wide range of wheel locks and clamps available, from well-known brands such as Milenco, Bulldog, Maypole and Fullstop. Look for products marked to at least a Sold Secure Gold rating.

Before you buy, do check that the lock is suitable for the type of wheels and tyres that your vehicle has.

In addition, bear in mind that some clamps can be heavy, so they will eat up your payload if you're not careful.

Finally, stick a note on the steering wheel to remind you to remove the lock(s) before driving off!



Don't skimp on motorhome wheel locks – go for the best that you can afford, and if possible, buy more than one

### 2 Trackers

If you store your motorhome remotely, a tracker is a must – it will not only alert you to vehicle movement or the ignition being activated, it will also tell you the battery voltage, so that you can take action if the battery is going flat.

An insurance-approved tracker will typically cost in excess of £400, with the annual subscription fees often topping the £150 mark.

You can buy non-approved trackers for less, but do bear in mind that the police might not want to be involved in recovering a vehicle fitted with an unapproved tracker if its location system isn't pinpoint accurate.

### 3 Security posts

Security posts are a lower-cost and relatively effective defence or deterrent against possible drive-away thefts for motorhomes stored at home.

Position your 'van on the driveway and simply lock the post in place behind it. They're very quick to use, although a professional thief can also remove them pretty rapidly.

However, they could still be enough to convince any opportunist intruders to try their luck elsewhere.

Security posts tend to come in either bolt-down or concrete-in designs, the first option obviously being easier to install, but arguably less secure.



For top-level vehicle security, consider a CaSSOA storage site

### 4 Storage facilities

According to insurance company figures, more than half of leisure vehicles are stolen from outside the owner's home, while just a fraction of that number are taken from secure storage facilities.

This is reflected in the discounts – some insurers offer up to 25% lower premiums if you store your 'van in a secure facility.

Many people keep their motorhome at farms or similarly remote spots when

they're not in use. These sites tend to be cheaper, but some places are so secluded that a thief who does discover a vehicle in storage there will have all the time in the world to defeat any security measures.

For the ultimate level of security, you should consider using a specialist facility that is registered with the Caravan Storage Site Owners' Association (CaSSOA), and in particular, one that has been rated Silver, Gold or Platinum.



### 5 CCTV

CCTV has become far more affordable in recent years, and many systems only require a power supply – they don't need hardwiring into a video feed with cables running around your property.

Cleverly, the latest designs will also link easily to your home Wi-Fi, and the footage can be stored on a hard drive or in the cloud. Be sure to fit cameras out of reach, while clearly overlooking your stored motorhome.

Systems are available from under £100, but generally you will tend to find that the more you pay, the better the camera quality is going to be.

If your CCTV records images beyond your property's boundaries, you must use it in line with data protection law.

### 6 Door security

On coachbuilt motorhomes, the easiest lock to compromise is usually the one fitted on the habitation door. This is especially applicable to those with just a single locking point (latch/bolt).

A 'D' handle that locks in front of the door can help to provide additional security, as well as aiding the access and egress of occupants.

Door bars and chain security are also available for the cab doors – in effect, linking the driver and passenger ones



The habitation door in a coachbuilt 'van could tempt thieves, but a locking 'D' handle can provide additional security

together – although we would suggest buying additional deadlocks and/or lock shields before these.

### 7 Steering wheel locks

As with their motorhome wheel lock cousins, it's important to buy the best that you can afford here.

Be sure to measure the diameter of your steering wheel before purchasing, to check that the one you're proposing to buy will fit, and again, it's wise to look for a product that's been rated to at least a Sold Secure Gold rating.

Various types of lock are available, including bars that slot through the steering wheel, and large circular units that are fitted straight over the top.



When you buy a steering wheel lock, look for one that has been rated Sold Secure Gold, such as this Disklok

### 8 Alarms and immobilisers

Most 'vans have a factory-fitted immobiliser that is extremely difficult to get around without the code from the key. These are integrated into the ECU and the wiring loom, so the days of hot-wiring by cracking the ignition barrel are long gone.

However, professional thieves can copy keys, so it is well worth adding another alarm or immobiliser, often referred to as a ghost, because they won't know it's there.

These can be programmed so they won't unlock the ignition without a sequence of button presses on the steering wheel, or via a code pad, additional key fob or card.

### 9 Pedal locks

An effective method for preventing theft is a pedal lock system. These stop all three pedals (two in an auto) being operated. Being buried in the footwell, they are also difficult to remove.

In addition, chopping the pedals off makes life hard for the criminal. Their downside is that they rely on warning labels to act as a deterrent.

### 10 Locking wheel bolts

If your motorhome has no locking wheel bolts, fit a Thatcham-approved set. Don't leave the key with the factory toolkit – everyone does that and the thieves know it!

Some people add an extra locking wheel bolt, but this isn't necessary – they only offer limited protection and locking wheel nut defeat kits are widely available.

Alloys are less of a target these days, largely because prices have tumbled. Scrap prices are £5–£10 per wheel, so they're not such a high-value item for the effort involved in removing them.

They're also bulky for thieves to carry and store, so most will target something smaller and easier to sell.



## advice

# STAY WARM ON TOUR THIS WINTER

You've decided to use your vehicle in the colder months, but how to keep warm? John Sootheran outlines ways to take the chill off, whatever the weather

### ■ Insulation

Motorcaravanning during the winter is a unique experience, and with a little preparation, a hugely positive one.

For starters, it really helps if you have a motorhome or campervan with the best insulation possible. Those hardy folk who decide to head out on tour in the worst weather conditions will benefit from looking for a motorhome or camper boasting Grade 3 insulation.

This is the official accreditation for four-season use, otherwise known as BS EN 1645-1 accreditation.

The NCC manages this accreditation, and all accredited vehicles are embossed with a special 'Approved' badge.

It makes hundreds of British and EU standard compliance checks on leisure vehicles. One section of BS EN 1645-1 covers levels of thermal insulation.

Each model is chilled to  $-15^{\circ}\text{C}$  in a cold chamber. The doors and windows are then closed and the 'van heating turned on. All of the heating vents are opened to allow heat from the boiler to circulate throughout, and solely for the purposes of the test, features that are included as standard in the production model are permitted inside.

Experts measure the time it takes for the interior of the 'van to reach  $20^{\circ}\text{C}$ . The power required to keep the internal temperature at  $20^{\circ}\text{C}$  is also measured.

Most manufacturers include BS EN 1645-1 thermal insulation grading in their technical specs.

Motorhomes hold their heat quite well - to find out more about vehicle cold-chamber testing, see *Practical Motorhome* issue 262.

If you have a coachbuilt, you could find that a large amount of heat is lost through the cab, which doesn't have the same insulation properties as the rest of the vehicle.

Exterior silver screens can help (and mean you'll be less likely to have to scrape ice off the windscreen in the morning), and a curtain drawn around the cab insulates it to some extent.

Even in the depths of winter, touring is wonderful, so long as you prepare your vehicle (and yourselves) carefully





**‘For starters, it really helps if you have a motorhome or campervan with the best insulation possible’**

Like domestic central heating, Alde's wet system pumps hot water around to the radiators



If you're buying a new motorhome, you might find that one of the optional extras is a Winter Pack. If you plan to tour off-season (or you think that any subsequent owners might), it's worth ticking the box. This can get you water tank insulation, tank heaters and more.

### ■ Heating

There's an excellent choice of heating systems in motorhomes. Most function on gas and electricity, and combine the two for maximum output. Truma and Whale both make blown-air heating systems. These pipe hot air through ducting and around the vehicle.

Alde, meanwhile, uses a wet system. Like domestic central heating, hot water is pumped around the 'van to radiators, which are hidden behind the furniture, to warm the interior.

Both systems have their devotees. Some motorhome owners believe that blown-air heating can leave cold spots around the interior, so they prefer the 'all-encompassing' heat from the Alde radiator system.

I've never found this myself, though, and I rather like the speed with which blown-air heats up a leisure vehicle.

Alde needs more maintenance, has a potential risk of leaking, is heavier and costs more, but it is quieter, and you also get heated towel rails with this system, which is a real bonus.

Winter motorcaravanners should check that their motorhome has no exposed heating ducts underneath, because this will greatly affect the performance of the heater in very cold weather. Internal ducting is best and can be further insulated to raise the system's performance levels.

All three of these systems will also provide the hot water supply and have →







For touring in the winter months, it's essential to choose propane gas, rather than butane

LED control panels fitted in accessible positions inside the motorhome.

Cleverly, Truma and Alde systems can also be controlled remotely, using an app on a digital device.

So long as you can get a Wi-Fi or 4G signal, you can turn on the heating or hot water in the 'van from anywhere, using Truma's iNet or Alde's Smart Control. This way, you get back to a lovely warm motorhome, with plenty of hot water for a reviving shower.

Motorhome heating systems are, of course, very much a matter of personal preference, so it probably makes most sense to research them all, then sound out friends who tour.

### ■ Gas supplies

For motorcaravanning in the winter months, it makes sense to choose propane gas, rather than butane.

Propane vaporises (that is, turns from a liquid to a gas) at temperatures down to  $-42^{\circ}\text{C}$ , whereas butane stops 'gassing' at  $-2^{\circ}\text{C}$ .

Whichever you decide to use, don't underestimate winter consumption levels, and consider carrying a spare bottle. For more on gas, see p104.

## Draughts & cold spots

If your motorhome feels draughty, don't be tempted to block off the drop-out vents in the floor. These are crucial to allow the escape of heavier-than-air propane and butane gases, should you have a leak. Instead, consider insulating the floor areas under beds and sofas, and in the cupboards, with some carpet or specialist insulation material.

Wheel arches and gas locker bulkheads are also sometimes left uninsulated, and might benefit from some additional lagging, too.

### ■ Water system

In a cold snap, frozen water and waste pipes are common problems. Some motorhomes (particularly those from Continental manufacturers) have heated fresh- and waste-water tanks, but if yours doesn't, you'll need to keep an eye on the system to check that it doesn't freeze.

One option is to use a low-wattage aquarium heater, which can help to prevent the water in your tank from freezing in the winter.

Either way, we always keep a large canister full of drinking water in the motorhome, just in case.

One way of ensuring that you won't be left with a frozen waste-water tank is to keep the tap open, with a bucket placed underneath.

You will need to keep an eye on it to check that it doesn't overflow, but this will help to keep the water in the 'van system moving as it should.

### ■ Leisure batteries

You're almost certainly going to be consuming more power when you tour in the winter, thanks to the combination of lower temperatures, shorter days and more time indoors.

Low-season motorcaravanners should consider upgrading their leisure battery to allow for this, particularly if you like to go off-grid, staying at sites without electric hook-up.

A 100Ah leisure battery would be ideal, always remembering that batteries are not going to perform as well in cold temperatures.

There's little point insulating your battery, because it will have no effect during extended cold periods. It might also take longer for it to warm back up when the sun comes out.

Bear in mind that shorter winter days and the low angle of the sun will make solar panels significantly less effective.



CUT ALONG DOTTED LINE



It's really important to guard against frozen pipes in winter by insulating your motorhome's water system





**‘Be prepared, and take extra clothes: thick socks, your warmest pyjamas and a sweater. A winter duvet and a hot-water bottle are good ideas, too’**



When considering solar panels as an energy source, keep in mind your increased power consumption in the winter, and their reduced effectiveness

### ■ Useful accessories

A drive-away awning will be handy if you tour a lot in winter – especially if you enjoy outdoor pursuits.

Awnings create an ‘airlock’, where you can remove your wet gear and dirty boots, without letting too much of that precious heat escape.

A compact, sturdy air or pole awning should suffice, making sure that it is pegged down securely. On a frozen pitch, a cordless drill with a long, 4mm-diameter masonry bit can be used to make a guide hole for pegs.

Be prepared, and take extra clothes: thick socks, your warmest pyjamas and a sweater. A winter duvet (12 tog) and a hot-water bottle are good ideas, too.

Snow chains can be useful, and are essential if you plan to tour elsewhere in Europe. Most importantly, be safe – make sure you have fitted a carbon monoxide detector and a smoke alarm.



In colder weather, an awning can help to prevent your motorhome from losing precious heat